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ABSTRACT

The criteria in this guide for evaluating interactive video instructional programs are based on principles of learning and motivation, and emphasize the design, production, presentation, and usage of interactive video programs. Presented in the format of a rating scale, the criteria are grouped into nine broad categories: (1) information about the program and how to use it; (2) content; (3) entering, exiting, and user control of the program; (4) interactive questions, exercises, decisions, and other activities; (5) other learning considerations (including motivation, creativity, pacing, attention to alternative learning styles, and quality of pretests); (6) back-up facilities; (7) presentation; (8) technical considerations; and (9) programming (including freedom from "bugs" and ease of booting-up). Detailed explanations of the individual criteria are also provided. (GL)

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101 CRITERIA FOR APPRAISING INTERACTIVE VIDEO

A Futuremedia Guide

futuremedia

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Introduction

Futuremedia has been developing interactive video programmes since 1982 and has established a track record of innovation, quality and excellence in the development and presentation of the IV medium. Drawing on the skills of its permanent team of writers, designers, video engineers, producers and programmers, Dr. Peter Copeland, Managing Director and Michael Griffiths, Senior Courseware Developer, have analysed and presented the criteria that most influence the successful production of IV. Based on sound principles of learning and motivation the criteria emphasise the design, production, presentation and usage aspects of programmes.

The criteria themselves and the associated explanation of the 101 factors is detailed and comprehensive. However, in evaluating interactive video programmes other factors such as the amount of learning gain achieved, the post-programme attitudes adopted, the extent to which the trainees are motivated and the impact on the trainee's performance at work, should also be considered at some stage.

Establishing the degree to which a given IV programme achieves these things is not an easy task. It requires a formal approach to evaluation which identifies, controls and assesses the significance of the many variables which affect the learning process. Essentially, it requires a controlled experiment.

This guide, distilled from the skills and experience of the Futuremedia team can be utilised, effectively, both as a precursor to such an experiment and as a valuable source of information on IV programme design.

It will help you penetrate and demystify the detailed complexity of interactive video production and will save you time and effort in specifying IV requirements.

How to use the Guide

The term interactive video has been used to describe anything from a simple menu-based system which allows random access of linear sequences, to sophisticated, all singing and dancing simulations of real processes on videodisc.

Separating the effective from the ineffective, the good from the indifferent, is not always an easy task, especially without the availability of a detailed set of criteria on which to base a judgement.

What follows is a list of criteria which should be helpful to you in judging whether a particular interactive video product is suitable to meet the training needs you have identified. A key to the criteria is provided to explain what each one is intended to cover.

The criteria relate to design, production, presentation, programming and usage issues. Firstly you should decide how important each of the criteria is with regard to your intended application. The following rating is suggested:

A — Essential
B — Of some importance
C — Of little importance

Then rate the product in terms of how well it measures up to each of the criteria on a six point scale:

5 — Very good
4 — Good
3 — Just acceptable
2 — Poor
1 — Very poor
N/A — Not available with programme

Finally arrive at an overall judgement by correlating the results from the two rating scales.

Programme title _____

	A	B	C	5	4	3	2	1	N/A
Information about the programme and how to use it									
1. Clarity of objectives	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Completeness of objectives	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Extent to which objectives are related to real needs	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Specification of intended audience	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. Specification of study time	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Instructions about getting the programme running	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. Introduction to programme features and facilities	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. Explanation of use of user interface(s) (egs. keyboard, mouse, touch screen)	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. Instructions for exiting from the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. Information on following-up the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. Quality of trainer's manual	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. Quality of other documentation	☐	☐	☐	☐	☐	☐	☐	☐	☐
Content									
13. Appropriateness of content to objectives	☐	☐	☐	☐	☐	☐	☐	☐	☐
14. Appropriateness of content to audience	☐	☐	☐	☐	☐	☐	☐	☐	☐

	A	B	C	5	4	3	2	1	NA
15. Accuracy of content	☐	☐	☐	☐	☐	☐	☐	☐	☐
16. Comprehensiveness of content	☐	☐	☐	☐	☐	☐	☐	☐	☐
17. Up-to-dateness of content	☐	☐	☐	☐	☐	☐	☐	☐	☐
18. Avoidance of redundant content	☐	☐	☐	☐	☐	☐	☐	☐	☐

Entering, exiting and user control of the programme

19. Ease of getting into the programme content	☐	☐	☐	☐	☐	☐	☐	☐	☐
20. Ease of getting out of the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
21. Facility to return to the course at a later date and rejoin at the point left	☐	☐	☐	☐	☐	☐	☐	☐	☐
22. Availability of facilities by which user can control presentation (egs. pause, recap, skip, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
23. Extent to which user can select his/her own route through the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
24. Opportunity to review text and graphic screens	☐	☐	☐	☐	☐	☐	☐	☐	☐
25. Opportunity to review video sequences	☐	☐	☐	☐	☐	☐	☐	☐	☐

Interactive questions, exercises, decisions and other activities

26. Frequency of questions and exercises	☐	☐	☐	☐	☐	☐	☐	☐	☐
27. Meaningfulness of interactive questions and exercises	☐	☐	☐	☐	☐	☐	☐	☐	☐
28. Variety of questioning styles used (multiple choice, constructed response, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
29. Extent to which questions are clear and unambiguous	☐	☐	☐	☐	☐	☐	☐	☐	☐

	A	B	C	5	4	3	2	1	N/A
30. Extent to which questions and exercises are well integrated with the content	☐	☐	☐	☐	☐	☐	☐	☐	☐
31. Extent to which the user can influence events through responses and decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐
32. Extent to which interaction requires the user to **think** about what needs to be done	☐	☐	☐	☐	☐	☐	☐	☐	☐
33. Opportunity to practise skills	☐	☐	☐	☐	☐	☐	☐	☐	☐
34. Appropriateness of feedback	☐	☐	☐	☐	☐	☐	☐	☐	☐
35. Placing of feedback in relation to questions and exercises	☐	☐	☐	☐	☐	☐	☐	☐	☐
36. Use of feedback for providing learning guidance	☐	☐	☐	☐	☐	☐	☐	☐	☐
37. Availability of help in relation to specific questions and exercises	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other learning considerations									
38. Extent to which the programme motivates the user	☐	☐	☐	☐	☐	☐	☐	☐	☐
39. Creative use of the potential offered by the medium	☐	☐	☐	☐	☐	☐	☐	☐	☐
40. Extent to which learning activities support the acquisition of knowledge and skills	☐	☐	☐	☐	☐	☐	☐	☐	☐
41. Evidence of an overall design strategy for the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
42. Pacing of learning	☐	☐	☐	☐	☐	☐	☐	☐	☐
43. Extent to which programme varies over repeated use	☐	☐	☐	☐	☐	☐	☐	☐	☐
44. Extent to which alternative learning styles and strategies are catered for	☐	☐	☐	☐	☐	☐	☐	☐	☐
45. Quality of pretests	☐	☐	☐	☐	☐	☐	☐	☐	☐

	A	B	C	5	4	3	2	1	N/A
46. Extent to which different learner abilities are catered for									
47. Extent to which programme anticipates problems a user may have									
48. Way in which programme accommodates mistakes made by the user									
49. Extent to which programme can adapt presentation of information if the user experienced difficulty first time through									
50. Use of language in relation to audience									
51. Flexibility of the programme in responding to the unexpected									
52. Extent to which learners find the programme easy to use									
53. Avoidance of loops from which the user cannot get out									

Back-up facilities

54. Availability of back-up structure such as glossaries, indexes, enquiry desk, word processor option for note taking									
55. Quality of back-up features									
56. Method of accessing back-up features									
57. Ease of use of back-up features									
58. Availability of help in relation to use of the system									
59. Mapping of user progress									
60. Facility for trainer to monitor user performance through, say, computer management facility									

	A	B	C	5	4	3	2	1	NA

Presentation

61. Attractiveness of packaging
62. Text screen design
63. Legibility of text fonts
64. Consistency of use of text fonts
65. Consistency of use of text colours
66. Colour of text in relation to background
67. Readability of text screens
68. Text layout
69. Spelling and punctuation
70. Quality of computer graphics
71. Effectiveness of animated computer graphics
72. Quality of video graphics
73. Effectiveness of animated video graphics
74. Integration of computer and video pictures
75. Quality of acting
76. Choice of presenter

	A	B	C	5	4	3	2	1	N/A
77. Choice of voice-over	☐	☐	☐	☐	☐	☐	☐	☐	☐
78. Enunciation of presenter/voice-over	☐	☐	☐	☐	☐	☐	☐	☐	☐
79. Pace of presenter/voice-over	☐	☐	☐	☐	☐	☐	☐	☐	☐
80. Avoidance of patronising delivery	☐	☐	☐	☐	☐	☐	☐	☐	☐
81. Settings for dramatic scenes	☐	☐	☐	☐	☐	☐	☐	☐	☐
82. Use of effects such as audio cues and sound effects	☐	☐	☐	☐	☐	☐	☐	☐	☐
83. Appropriateness and effectiveness of music	☐	☐	☐	☐	☐	☐	☐	☐	☐
84. Variety of stimuli used	☐	☐	☐	☐	☐	☐	☐	☐	☐
85. Credibility of scenes	☐	☐	☐	☐	☐	☐	☐	☐	☐
86. Arrangement of audio, video and computer sequences to give a seamless presentation	☐	☐	☐	☐	☐	☐	☐	☐	☐
87. Appropriate use of special visual effects	☐	☐	☐	☐	☐	☐	☐	☐	☐
Technical considerations									
88. Technical adequacy of the pictures	☐	☐	☐	☐	☐	☐	☐	☐	☐
89. Technical adequacy of the sound	☐	☐	☐	☐	☐	☐	☐	☐	☐
90. Matching of audio levels on the two channels	☐	☐	☐	☐	☐	☐	☐	☐	☐
91. Avoidance of interfield flicker on still frames	☐	☐	☐	☐	☐	☐	☐	☐	☐
92. Stability of colour on still frames	☐	☐	☐	☐	☐	☐	☐	☐	☐

	A	B	C	5	4	3	2	1	N/A
93. Extent to which edits are fluent	☐	☐	☐	☐	☐	☐	☐	☐	☐
94. Use of field doubling where appropriate	☐	☐	☐	☐	☐	☐	☐	☐	☐

Programming

95. Freedom from 'bugs'	☐	☐	☐	☐	☐	☐	☐	☐	☐
96. Ability to discriminate mistakes from inputting errors (eg. spelling errors)	☐	☐	☐	☐	☐	☐	☐	☐	☐
97. Extent to which instant break-out is facilitated (eg. leaving a video sequence at any point to consult a glossary, then returning)	☐	☐	☐	☐	☐	☐	☐	☐	☐
98. Ease of booting-up the programme	☐	☐	☐	☐	☐	☐	☐	☐	☐
99. Extent to which programme makes use of existing system facilities (eg. instant jump, software control of fades, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
100. Ease with which student management information can be extracted	☐	☐	☐	☐	☐	☐	☐	☐	☐
101. Accuracy of in and out points for searching on the videodisc	☐	☐	☐	☐	☐	☐	☐	☐	☐

Overall judgement:

Good	☐
Acceptable	☐
Unacceptable	☐

Explanation of the Criteria

Information about the programme and how to use it

1. **Clarity of objectives**
   Are the intended outcomes of the programme explicit and are they expressed in operational terms? In other words, do they describe what a successful user will be able to do as a consequence of using the programme?

2. **Completeness of objectives**
   Are all the important intended outcomes identified with none missing.

3. **Extent to which objectives are related to real needs**
   Are the objectives clearly derived from a training needs analysis? Do they address genuine training requirements?

4. **Specification of intended audience**
   How clear is it who the programme is aimed at? Is the type of audience explicitly stated?

5. **Specification of study time**
   Is it clear how long it will take an individual to work through the programme and is this information accurate? In some cases a range of study times may be given to cater for the possibility of a user accessing optional aspects of a programme. Remember, a videodisc side may be regarded as 36 minutes of running video or it may generate as much as a 50 hour study session depending on the extent of the interaction.

6. **Instructions about getting the programme running**
   How easy is it to get the programme up and running on the basis of the information provided with the programme? Are the instructions complete with all critical steps identified? Has life been made easy for the user?

7. **Introduction to programme features and facilities**
   Does the programme describe its own use and how well does it do this? For example are function key uses explained where appropriate? Are optional databases introduced and described, etc?

8. **Explanation of use of user interface(s)**
   How well are the features of the keyboard, mouse, trackerball, touch screen, etc. introduced and explained?

9. **Instructions for exiting from the programme**
   How does the user know what to do when he/she wishes to end a study session? Are there clear instructions?

10. **Information on following-up the programme**
    Are there any indications of how a user can go on to apply what has been learnt and/or are any further appropriate learning activities identified?

11. **Quality of trainer's manual**
    How detailed is the information available to the trainer about how a programme is intended to be used? Are guidelines provided to assist the trainer in implementing the programme? How professionally presented is the manual?

12. **Quality of other documentation**
    How well presented is other documentation? For example, are guides on setting up any interactive video hardware systematically organised and presented?

Content

13. **Appropriateness of content to objectives**
    How close a match is there between the content presented in the programme and the actual knowledge, skills or attitudes represented in the objectives? Is the content relevant to the application cited?

14. **Appropriateness of content to audience**
    How carefully has the content been chosen to be of interest and relevance to the audience? For example, if the audience is diverse in background and experience is this reflected in the choice of the content? If the audience is relatively homogeneous in terms of background and experience is this taken into account? Can the intended audience relate to the content and/or the examples presented?

15. **Accuracy of content**
    To what extent is the content error free?

16. **Comprehensiveness of content**
    How complete is the content coverage? (This needs to be considered in relation to the objectives). Additional related content to that in the main part of the course may be cross-referenced or stored in optional databases. To what extent is this done?

17. **Up-to-dateness of content**

    Is the content current? Sensible design ensures that volatile information is stored by the computer to facilitate updating.

18. **Avoidance of redundant content**

    Does the programme stick to the point? Has the designer resisted the temptation to follow up points of interest for their own sake which are not necessarily appropriate to the objectives?

Entering, exiting and user control of the programme

19. **Ease of getting into the programme content**

    To what extent can experienced users bypass introductory information about the keyboard, etc. and get straight into the content? Do routing structures enable users to get to the piece of content they want quickly?

20. **Ease of getting out of the programme**

    Can the user exit the programme at **any** time? Is it obvious how to exit the programme?

21. **Facility to return to the course at a later date and rejoin at the point left**

    Some programmes can take a considerable time to complete. If a user's progress is monitored and stored, this information can enable the user to rejoin the programme at a later time at the appropriate point. Does the programme facilitate this? Does the user get the opportunity to review previous progress before continuing?

22. **Availability of facilities by which user can control presentation (egs. pause, recap, skip, etc.)**

    How much control is the user given over the pace of the presentation? Is it possible to stop to study a picture or take notes? Can the user recap video sequences or accelerate progress through them if desired?

23. **Extent to which user can select his/her own route through the programme**

    Are alternative routeways available through the programme content, or is it necessary to go from beginning to end? Once the user has chosen a route is it possible to change that route at any time?

24. **Opportunity to review text and graphic screens**

    Can a user go back to text and graphic screens, or, once they have gone, have they gone for good? When a series of text or graphics screens is presented can a user go forward and backward through them at will?

25. **Opportunity to review video sequences**

    Can a user recap a video sequence? Is it necessary to look at the whole sequence or can the recapping be done selectively? Is the recapping only possible while the video is playing or can it also be done when the play sequence has been completed?

Interactive questions, exercises, decisions and other activities

26. **Frequency of questions and exercises**

    Is the user kept actively involved in the learning through interactive participation? Does the programme avoid long linear video sequences which are only occasionally interspersed with questions, decision points and exercises (often called 'interrupted video' as opposed to interactive video)?

27. **Meaningfulness of interactive questions and exercises**

    To what extent are the interactive features relevant to the achievement of the objectives of the programme? Does the programme avoid gratuitous interaction which appears to serve no real purpose?

28. **Variety of questioning styles used**

    Is there sufficient variety in the form of questioning to prevent the the user becoming bored? Is the questioning style appropriate to the objective in all cases

29. **Extent to which questions are clear and unambiguous**

    Is it clear to the user what is required by the questions? Are the questions well phrased? Do they facilitate discrimination between those who possess the knowledge required by the question and those who do not?

30. **Extent to which questions and exercises are well integrated with the content**

    Do the questions and exercises appear to be an integral part of the programme rather than an interruption to the flow? Do they relate well to the content?

31. **Extent to which the user can influence events through responses and decisions**

    Does the programme truly adapt the presentation according to user input, for example are alternative video branches invoked at questions and decision points? Are mixed initiative techniques used? In other words can the user decide what should happen next as well as simply responding to events? Does the user influence events in real time, ie. as they happen?

32. **Extent to which interaction requires the user to think about what needs to be done**

How challenging is the programme? Is it likely to stretch the user?

33. **Opportunity to practise skills**

During the encounter with the programme to what extent is the user able to practise skills which the programme is designed to teach?

34. **Appropriateness of feedback**

Is the feedback appropriate when looked at in the context of a user's input? Does it go further than simply identifying correct and incorrect inputs? Does it provide positive reinforcement where appropriate?

35. **Placing of feedback in relation to questions and exercises**

Is feedback provided immediately or at least without any significant delay? Research points to the importance of immediate knowledge of results.

36. **Use of feedback for providing learning guidance**

Does the feedback take into account difficulties a user is experiencing? Does it suggest how perceived gaps in a user's knowledge or skills can be rectified?

37. **Availability of help in relation to specific questions and exercises**

Is help provided in the form of clues or prompts? Are opportunities provided to review material or to refer to optional databases before answering questions? Is help multilevel, for example do successive clues take the user progressively closer to the required answer? Are demonstrations available?

Other learning considerations

38. **Extent to which the programme motivates the user**

Is the programme able to engender interest? Is humour used where appropriate? Is the programme likely to make the user care sufficiently about the content to want to learn?

39. **Creative use of the potential offered by the medium**

What is the incidence of creative and imaginative ideas that are successfully implemented within the programme design?

40. **Extent to which learning activities support the acquisition of knowledge and skills**

Do the learning activities focus on the outcomes rather than the activities themselves?

41. **Evidence of an overall design strategy for the programme**

Does the programme appear to have been developed as a complete entity rather than a collection of pieces? Is there progression through the programme, for example from lower-order to higher-order skills?

42. **Pacing of learning**

Is the rate at which information is given appropriate? Can the user control the pace? Is there 'space' in the programme to enable the user to digest information? Are summaries provided?

43. **Extent to which programme varies over repeated use**

Can the programme adapt its presentation according to whether or not a user has been through the programme before? Are certain questions and exercises randomly generated so that there is a likelihood of different ones coming up on a second or third viewing?

44. **Extent to which alternative learning styles and strategies are catered for**

Is allowance made for the fact that different people learn in different ways? Is information available in more than one form? Is it possible to study the content in more than one way? Can the user select the order in which concepts are dealt with or is everything prestructured?

45. **Quality of pretests**

Pretests give a user the opportunity to demonstrate mastery of objectives before embarking on a course. Where these are provided, are they appropriate to the objectives? Do they discriminate between those who have mastered the objectives and those who have not? Does the programme take into account the results of the pretest and provide advice about how to use the programme accordingly?

46. **Extent to which different learner abilities are catered for**

Does the programme acknowledge that some individuals may have more difficulty with the content than others? Are additional support sequences available, for example additional demonstrations, for those who need them? If the user experiences difficulty with a particular concept or skill, is the programme able to store this information and make use of it when similar concepts or skills are encountered in other parts of the programme?

47. **Extent to which programme anticipates problems a user may have**

This relates to the care with which the research for the programme was carried out. Research should reveal which areas of content, or which steps in a procedure or skill are likely to be most problematic for a learner so that additional support can be built in. To what extent does this seem to have been done?

48. **Way in which programme accommodates mistakes made by the user**

Does the programme avoid 'punishing' the user for mistakes? Does the response given in the programme acknowledge the user's error and provide constructive guidance?

49. **Extent to which programme can adapt presentation of information if the user experienced difficulty first time through**

If by his/her responses it is clear that a user is having difficulty with a concept or skill can the programme reteach it in a different way or preferably several different ways, to find out where the user's problem is and overcome it?

50. **Use of language in relation to audience**

Is the audience able to relate to the language used? Are users able to understand the language used? Does the use of language on text screens reflect the likely reading age of members of the audience? Is jargon which is not relevant to the objectives and not likely to be used by all members of the audience avoided?

51. **Flexibility of the programme in responding to the unexpected**

What happens when an unanticipated key is pressed or an unexpected answer is given to a question? How well does the programme cope?

52. **Extent to which learners find the programme easy to use**

Is there any evaluation data available to reveal user's reactions to use of the programme?

53. **Avoidance of loops from which the user cannot get out**

Has the design anticipated and avoided instances where the user is trapped in the programme? An example of a loop would be where a typed input is required, for instance a particular word, before the user can progress. Even if the user does not know the word the programme continues to ask for it, thus preventing the user from progressing.

Back-up facilities

54. **Availability of back-up structure such as glossaries, indexes, enquiry desks, word processor option for note taking**

Can the user access additional information in the form of databases which are related to the content of the programme but sit outside the mainstream? Can the user keep notes within the system itself? Is an index of the programme content provided?

55. **Quality of back-up features**

Are the back-up features clearly an integral part of the programme rather than appearing to be an after thought? Do they complement the programme objectives? Do they blend in with the style of the rest of the programme? Are they comprehensive?

56. **Method of accessing back-up facilities**

Is it easy for a user to access back-up facilities, for example, are they available at a single key stroke or click of a pointing device? Is their availability kept in the mind of a user, perhaps through icons which appear on the screen? Can they be accessed at any time?

57. **Ease of use of back-up features**

Are instructions on their use provided? Can experienced users bypass the instructions? How easy is it for a user to access a particular facility or piece of information, for example is it possible to browse as well as select from a list or menu? How easily can a user return to the mainstream part of the programme?

58. **Availability of help in relation to use of the system**

If the user becomes stuck because, for example, he/she has forgotton how to use mouse, is help instantly available? Similarly with regard to use of optional facilities, or exiting from the course, etc.

59. **Mapping of user-progress**

Is the user able to find out where he/she is in relation to the content of the course? Is it clear which parts of the course have been started, which parts have been finished and which the user has yet to embark on?

60. **Facility for trainer to monitor user performance through, say, computer management facility**

Where a monitoring facility is provided, how comprehensive is it? Does it store all responses? Can it store responses for an individual who goes through the course several times? How is the data presented to the trainer? Can it be represented in graphic form? Does the facility enable statistical analysis to be carried out?

Presentation

61. **Attractiveness of packaging**

    Is the packaging of the programme professional in appearance? Have the producers of the programme considered it to be of sufficient value to put money and effort into packaging it properly?

62. **Text screen design**

    Are the text screens interesting and functional? Is content information clearly distinct from instructions on what to do, eg. make a choice, press a key etc? Is an area of the screen reserved for function key icons? Is the basic screen design consistent?

63. **Legibility of text fonts**

    How easy to read is the text? Is it proportionally spaced? Is drop shadow utilised to advantage?

64. **Consistency of use of text fonts**

    Does the use of fonts remain consistent throughout the programme? Where fonts are mixed do they complement each other?

65. **Consistency of use of text colours**

    Are text colours consistently used throughout the programme, for example one colour for information another for instructions, another for highlighting?

66. **Colour of text in relation to background**

    Is there sufficient contrast between the text and background colours? Are clashing colours, such as red and blue, avoided on the same screen?

67. **Readability of text screens**

    Is the amount of information on each screen kept to a minimum to aid readability? Is lower case used rather than upper case to aid readability? Is good use made of space?

68. **Text layout**

    Is layout consistent and in accordance with the conventions of typography?

69. **Spelling and punctuation**

    Are the screens error free in terms of spelling and punctuation?

70. **Quality of computer graphics**

    Have the capabilities which the computer offers for graphics display been well utilised? Are the graphics effective in meeting their objectives? Do they look as if they have been designed for the purpose?

71. **Effectiveness of animated computer graphics**

    Are the animated graphics from the computer convincing and effective? Are they well designed? Do they contribute to the presentation? Are the sequences well-paced? Is the resolution and speed adequate?

72. **Quality of video graphics**

    One of the virtues of IV is its capability to present different types of image. Are the video graphics effective in meeting their objectives? Do they look as if they have been designed for the purpose? Do they exploit the high quality of picture available from videodisc?

73. **Effectiveness of animated video graphics**

    Are animated sequences on the videodisc convincing and effective? Are they well designed? Do they contribute to the presentation? Are the sequences well-paced? Is the image quality good?

74. **Integration of computer and video pictures**

    How well is the graphic or filmic image from the videodisc supportive of the text/graphics from the computer? Where computer overlay is used has the video been framed to accommodate it? Is the line-up accurate? Does the computer text or graphic always remain in correct registration with the video even after the system has been switched off and on? If not does this affect the use of the programme? Is a means provided of checking the registration if it is critical to the use of the programme?

75. **Quality of acting**

    Has the production been well cast? Are the actors convincing in their roles?

76. **Choice of presenter**

    Is the presenter appropriate for the audience, ie. will they relate to him/her? Is the style and pace of delivery appropriate? Is he/she sufficiently formal/informal, authoritative/sympathetic, etc? Does he/she look right?

77. **Choice of voice-over**

    Is the voice-over artist appropriate for the audience, ie. will they relate to him/her? Is the style and pace of delivery appropriate? Is he/she sufficiently formal/informal, authoritative/sympathetic, etc?

78. **Enunciation of presenter/voice-over**

Does the presenter/voice-over artist speak clearly? Are words well enunciated? Are any dialects non-intrusive in that they do not detract from the messages being communicated?

79. **Pace of presenter/voice-over**

Is the presenter/voice-over artist's pace of delivery appropriate both to the content and to the audience?

80. **Avoidance of patronising delivery**

Does the style of the presentation avoid patronising the audience, ie. does it avoid being condescending?

81. **Settings for dramatic scenes**

Are the settings convincing and appropriate? Have the sets been properly dressed in terms of props? Do studio sequences, which are meant to look like location sequences, work?

82. **Use of effects such as audio cues and sound effects**

Are effects used to add value to the production? Are they used consistently? Where they are meant to cue the learner, for example to the imminent presentation of a question, do they work? Do they complement the video rather than being obtrusive?

83. **Appropriateness and effectiveness of music**

Is music used to good effect? Does it enhance the presentation? Does the music complement the visuals? Does the music avoid being intrusive?

84. **Variety of stimuli used**

Is there a good and appropriate mix of the media available within interactive video, viz:

Sound — effects, music, voice, etc.
Video — moving and still pictures
Graphics — static and dynamic
Text

85. **Credibility of scenes**

Are the contents of the scenes credible in terms of their possible occurrence in real life? Are they likely to be credible to the audience? Are they credible in terms of the objectives of the programme?

86. **Arrangement of audio, video and computer sequences to give a seamless presentation**

Has attention been paid to the physical arrangement of pictures, audio etc. on the disc to minimise search times and create the illusion of seamlessness? Is audio switching between channels imperceptible? Is the degree of seamlessness independent of answers and decisions taken in the course?

87. **Appropriate use of special visual effects**

Are special visual effects used to enhance the presentation? Do they serve a distinct purpose? Have the producers avoided using effects simply for their own sake?

Technical considerations

88. **Technical adequacy of the pictures**

Optical videodisc is a broadcast quality medium. Is this reflected in the pictures? Are they sharp? Are colours stable without 'bleed'? Are the pictures generally free from drop-outs?

89. **Technical adequacy of sound**

Is the sound well modulated? Is it clear and without hiss? Is it free from unwanted clicks and crackles? Is it of a consistent quality?

90. **Matching of audio levels on the two channels**

Does the audio remain at a consistent level, irrespective of the channel being listened to? Is it matched in terms of tonal quality?

91. **Avoidance of interfield flicker on still frames**

If the disc is stilled at particular points during interactive exercises, do the pictures remain stable without evidence of interfield flicker? (Avoidance of interfield flicker necessitates use of specialised editing equipment, which allows full PAL 8 field editing and in some instances, selective field doubling to be carried out).

92. **Stability of colour on still frames**

The stability of certain colours, especially primary colours, can be affected if proper attention has not been given to the colour phase settings, during the preparation of a videodisc pre-master tape. Does the programme display evidence of pulsating or flashing colours on still frames?

93. **Extent to which edits are fluent**

Are the video sequences well crafted with 'clean' edits that enhance the flow of the programme rather than disrupt it?

94. **Use of field doubling where appropriate**

Field doubling is required to ensure rock steady still frames in sequences where there is camera movement or where people or objects move in the frame. Are the still frames free from flicker caused by movements?

Programming

95. **Freedom from 'bugs'**

Does the programme run without computer crashes, often represented by error messages or the programme behaving in a strange way, such as not accepting an input?

96. **Ability to discriminate mistakes from inputting errors**

Does the programme accommodate errors which are clearly unintended, such as slight spelling errors? How flexible is it in terms of differentiating between such errors and genuine mistakes?

97. **Extent to which instant break-out is facilitated**

Can the user decide to exit, or choose a different section of content, or consult an optional database at any time during the programme or are these activities restricted in use?

98. **Ease of booting-up the programme**

Can the programme be booted-up without having to follow an elaborate procedure or, worse still, typing complex computer code?

99. **Extent to which programme makes use of existing system facilities**

How well does the programme utilise the special facilities of the hardware system? Are sound and picture fades used to good advantage, where the interface board provides these? Is instant jump — the ability to jump from one frame to another within a fixed range (usually up to 50) without visual discontinuity — used to advantage?

100. **Ease with which student management information can be extracted**

Where a management facility is provided how easily can information be extracted about an individual user or groups of users? Can information be output to a printer? Is statistical analysis carried out on group data? Can it be represented in graphical form? Is information well formatted?

101. **Accuracy of in and out points for searching on the videodisc**

Do the search points avoid clipping audio or video sequences? Do they appear to come in and go out at the right points?

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